

NOTES ON THE PUPA AND HOST PLANT OF *MOTASINGHA DIRPHIA* (HEWITSON) (LEPIDOPTERA: HESPERIIDAE)

P.R. WILSON

2 Billabong Drive, Bundaberg, Qld 4670

Abstract

The pupa of *Motasingha dirphia* (Hewitson) is briefly described and compared with that of *M. trimaculata* (Tepper). The putative host plant is *Tetraria octandra* (Cyperaceae).

Introduction

Motasingha dirphia (Hewitson, 1868) is restricted to the coastal and subcoastal areas of southwestern Western Australia (Braby 2000), occurring from Kowatharra Hill north of Geraldton in the north to as far west as Cocklebidy and Esperance on the south coast. It often flies in association with *M. trimaculata* (Tepper, 1882), with which it was once confused (Moulds and Atkins 1986). The immature stages and host plant have not been recorded previously.

Motasingha trimaculata is known from a number of disjunct populations in southern Queensland, central coastal New South Wales, southwestern Victoria, southern South Australia and southwestern and central coastal Western Australia (Braby 2000). The life history of *M. trimaculata* is well known, with the larval host plants mainly consisting of Cyperaceae throughout its range but including Haemodoraceae in Western Australia (Williams *et al.* 1993).

During a visit to Perth, Western Australia, in September-October 2015, a pupa closely resembling that of *M. trimaculata* was discovered on a sedge at the base of a *Eucalyptus* tree in eucalypt woodland near Lesmurdie (32°00'55" S, 116°02'33" E; WGS 84) on the edge of the Darling Scarp, 17 km east of Perth. The pupa was in a curled, dead leaf attached to a tubular shelter of a 'grass-like' sedge. A search of the surrounding area failed to find any more immature stages. A male *M. dirphia* emerged eight days later on 30 September 2015.

Immature stages

Egg. Unknown.

Larva. Unknown.

Pupa. Length 24 mm; head and thorax black, abdomen brown; pupal cap black with one central and two dorsal raised rugose projections (Fig. 1); cremaster brown, slightly tapered (Fig. 3).

The pupa of *M. dirphia* closely resembles that of *M. trimaculata occidentalis* Moulds & Atkins, with the main difference being the larger raised dorsal projections on the pupal cap of *M. trimaculata* (Fig. 2). The cremaster of *M. dirphia* is similar to that of *M. trimaculata* (Fig. 4).



Figs 1-6. Pupa and host plant of *Motasingha* spp: (1-2) pupal caps: (1) *M. dirphia*; (2) *M. trimaculata occidentalis*. (3-4) pupal cremasters: (3) *M. dirphia* (male); (4) *M. trimaculata occidentalis* (female). (5-6) *Tetraria octandra*, host plant of *M. dirphia*: (5) plant; (6) flower spike.

Life history

The host plant appears to be *Tetraria octandra* (Cyperaceae: Figs 5-6), a ‘grass-like’ sedge endemic to southwestern Western Australia (Fig. 7) and known to occur from north of Geraldton south to Albany. The plant distribution corresponds closely with that of *M. dirphia*. However, the outlying records of *M. dirphia* at Cocklebidy and Esperance are outside the recorded range of *T. octandra*, suggesting incomplete plant records or an alternative host plant. The plant habit is clumping, being up to 0.3 m wide with leaves up to 1.2 m in length, but more commonly 0.5-0.8 m long. Leaves are erect when young or regenerating after fire (Fig. 5), then ‘drooping’ to the ground when mature.

Tetraria octandra



Fig. 7. Distribution of *Tetraria octandra* (Source – FloraBase, Department of Parks and Wildlife, WA).

The single pupa collected was in a curled, dead *Eucalyptus* leaf joined by silk to a tubular shelter constructed from leaves of the putative host plant. Whether in an adjacent curled dead leaf, rather than in the tubular shelter on the host plant, is the usual location for pupation requires confirmation. The silked, eaten leaves containing the shelter were approximately 15 cm long and surrounded by extensively eaten leaves.

The egg and larva of *M. dirphia* are currently unrecorded, but it is hoped that knowledge of the host plant may assist others in locating and recording further details of the early stages.

Acknowledgements

I gratefully thank the Queensland Herbarium for identifying the host plant, Matt Williams (Department of Parks and Wildlife WA) for advice on the life history, Mark Brundrett (Department of Parks and Wildlife WA) for the plant photographs and David Merefieid (Bundaberg) for photography of the pupae.

References

- BRABY, M.F. 2000. *Butterflies of Australia: their identification, biology and distribution*. CSIRO Publishing, Melbourne; xx + 976 pp.
- MOULDS, M.S. and ATKINS, A.F. 1986. The specific status of *Motasingha trimaculata* (Tepper) (Lepidoptera: Hesperidae) with the description of a new subspecies. *General and Applied Entomology* **18**: 25-32.
- WILLIAMS, A.A.E., WILLIAMS, M.R., HAY, R.W. and TOMLINSON, A.G. 1993. Some distributional records and natural history notes on butterflies from Western Australia. *Victorian Entomologist* **23**: 126-131.